

REMARKS

The Office Action dated January 16, 2007, has been received and carefully considered. Reconsideration of the outstanding objections/rejections in the present application is respectfully requested based on the following remarks.

I. THE ALLOWANCE/ALLOWABILITY OF CLAIMS 1-71, 75, 77-79, 142-147, AND 172-175

Applicant notes with appreciation the indication on page 8 of the Office Action that claims 1-71, 142-147, and 172-175 are allowed. Applicant notes with equal appreciation the indication on page 9 of the Office Action that claims 75 and 77-79 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, Applicants have opted to defer rewriting the above-identified claims in independent form pending consideration of the arguments presented below with respect to the rejected claims.

II. THE OBVIOUSNESS REJECTION OF CLAIMS 72-74, 76, 80-88, 106, AND 107

On pages 2-7 of the Office Action, claims 72-74, 76, 80-88, 106, and 107 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gitlin et al. (U.S. Patent No. 5,191,462) in

view of Thomas (U.S. Patent No. 3,534,273). This rejection is hereby respectfully traversed.

Regarding claim 72, the Examiner now acknowledges that Gitlin et al. fails to disclose generating a second received data value based on the first and second data samples if the mode select signal is in a second state, wherein the second received data value includes more constituent bits than the first received data value, as claimed. However, the Examiner now asserts that Thomas discloses a binary mode and a multilevel mode, and thus it would have been obvious to modify the teachings of Gitlin et al. in view of the teachings of Thomas to arrive at the claimed invention. Applicants respectfully disagree.

First of all, it should be noted that the Examiner supports his position by asserting that Gitlin et al. discloses the use of multilevel signaling, and thus such multilevel signaling would produce decision values with more constituent bits than binary signaling. However, nowhere does Gitlin et al. disclose, or even suggest, that a second received data value, including more constituent bits than a first received data value, is generated based on first and second data samples if a mode select signal is in a second state, as claimed. To remedy this shortcoming of Gitlin et al., the Examiner attempts to rely on

the teachings of Thomas. However, Thomas merely discloses a technique for determining the boundaries of signal eyes, which may be used in signal transmission systems having any type of signal structure. That is, the technique disclosed by Thomas may be used in any multilevel signal system. Even so, Thomas does not disclose the use of different modes, and more particularly the use of any type of mode select signal. Instead, Thomas merely describes principles that may be applicable to any multilevel signal system. Thus, any combination of Gitlin et al. and Thomas, if there were any motivation to make such combination, would merely result in the system of Gitlin et al. wherein the signal eye boundary for a particular signal type may be determined according to the technique of Thomas. Such a combination clearly falls short of a teaching of the claimed invention. Accordingly, is it respectfully submitted that claim 72 is allowable over Gitlin et al. and Thomas, either alone or in combination.

Regarding claims 73, 74, 76, and 80-88, these claims are dependent upon independent claim 72. Thus, since independent claim 72 should be allowable as discussed above, claims 73, 74, 76, and 80-88 should also be allowable at least by virtue of their dependency on independent claim 72. Moreover, these claims recite additional features which are not disclosed, or

even suggested, by the cited references taken either alone or in combination.

Regarding claim 106, the Examiner now acknowledges that Gitlin et al. fails to disclose a threshold generating circuit to establish the selected threshold level, the threshold generating circuit establishing the selected threshold level at a first threshold level if a mode select signal is in a first state, and establishing the selected threshold level at a second threshold level if the mode select signal is in a second state, as claimed. However, the Examiner now asserts that Thomas discloses a binary mode and a multilevel mode, and thus it would have been obvious to modify the teachings of Gitlin et al. in view of the teachings of Thomas to arrive at the claimed invention. Applicants respectfully disagree.

Again, it should be noted that the Examiner supports his position by asserting that Gitlin et al. discloses the use of multilevel signaling, and thus such multilevel signaling would produce decision values with more constituent bits than binary signaling. It is unclear, however, how this relates to the claimed invention as multilevel signaling is not recited anywhere in claim 106. Instead, claim 106 recites a threshold generating circuit to establish the selected threshold level based upon the state of a mode select signal. As discussed

above, Gitlin et al. also fails to disclose, or even suggest, anything regarding the use of a mode select signal. To remedy this shortcoming of Gitlin et al., the Examiner again attempts to rely on the teachings of Thomas. However, Thomas merely discloses a technique for determining the boundaries of signal eyes, which may be used in signal transmission systems having any type of signal structure. That is, the technique disclosed by Thomas may be used in any multilevel signal system. Even so, Thomas does not disclose the use of different modes, and more particularly the use of any type of mode select signal. Instead, Thomas merely describes principles that may be applicable to any multilevel signal system. Thus, any combination of Gitlin et al. and Thomas, if there were any motivation to make such combination, would merely result in the system of Gitlin et al. wherein the signal eye boundary for a particular signal type may be determined according to the technique of Thomas. Such a combination clearly falls short of a teaching of the claimed invention. Accordingly, is it respectfully submitted that claim 106 is allowable over Gitlin et al. and Thomas, either alone or in combination.

Regarding claim 107, this claim is dependent upon independent claim 106. Thus, since independent claim 106 should be allowable as discussed above, claim 107 should also be

allowable at least by virtue of its dependency on independent claim 106. Moreover, claim 107 recites additional features which are not disclosed, or even suggested, by the cited references taken either alone or in combination.

In view of the foregoing, it is respectfully requested that the aforementioned obviousness rejection of claims 72-74, 76, 80-88, 106, and 107 be withdrawn.

III. THE OBVIOUSNESS REJECTION OF CLAIMS 108 AND 109

On pages 7-8 of the Office Action, claims 108 and 109 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gitlin et al. (U.S. Patent No. 5,191,462) in view of Thomas (U.S. Patent No. 3,534,273) and further in view of Popplewell et al. (U.S. Patent No. 6,304,071). This rejection is hereby respectfully traversed.

It is respectfully submitted that the aforementioned obviousness rejection of claims 108 and 109 has become moot in view of the deficiencies of the primary references (i.e., Gitlin et al. and Thomas) as discussed above with respect to independent claim 106. That is, claims 108 and 109 are dependent upon independent claim 106 and thus inherently incorporate all of the limitations of independent claim 106. Also, the secondary reference (i.e., Popplewell et al.) fails

to disclose, or even suggest, the deficiencies of the primary references as discussed above with respect to independent claim 106. Indeed, the Examiner does not even assert such. Thus, the combination of the secondary reference with the primary references also fails to disclose, or even suggest, the deficiencies of the primary references as discussed above with respect to independent claim 106. Accordingly, claims 108 and 109 should be allowable over the combination of the secondary reference with the primary references at least by virtue of its dependency on independent claim 106. Moreover, claims 108 and 109 recite additional features which are not disclosed, or even suggested, by the cited references taken either alone or in combination.

In view of the foregoing, it is respectfully requested that the aforementioned obviousness rejection of claims 108 and 109 be withdrawn.

IV. CONCLUSION

In view of the foregoing, it is respectfully submitted that the present application is in condition for allowance, and an early indication of the same is courteously solicited. The Examiner is respectfully requested to contact the undersigned by telephone at the below listed telephone number, in order to

expedite resolution of any issues and to expedite passage of the present application to issue, if any comments, questions, or suggestions arise in connection with the present application.

To the extent necessary, a petition for an extension of time under 37 CFR § 1.136 is hereby made.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0206, and please credit any excess fees to the same deposit account.

Respectfully submitted,

Hunton & Williams LLP

By: 

Thomas E. Anderson
Registration No. 37,063

TEA/vrp

Hunton & Williams LLP
1900 K Street, N.W.
Washington, D.C. 20006-1109
Telephone: (202) 955-1500
Facsimile: (202) 778-2201

Date: April 16, 2007